NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FIELD BORDER

(Feet)

CODE 386

DEFINITION

A strip of permanent vegetation established at the edge or around the perimeter of a field.

PURPOSES

- Reduce erosion from wind and water
- Soil and water quality protection
- Management of harmful insect populations
- Provide wildlife food and cover

CONDITIONS WHERE PRACTICE APPLIES

- At the edges of cropland fields
- To connect other buffer practices within the field
- To recreation land or other land uses where agronomic crops are grown
- To connect grassed waterways, filter strips, and other vegetated areas for ease of maintenance or harvest
- To establish setbacks for areas receiving manure, fertilizer, and other chemical applications
- To establish a setback for the protection of other conservation practices
- To protect field edges that are used for equipment turn and travel lanes
- To promote infiltration of surface water.
- To control completion from adjacent areas with woody vegetation
- This practice does not apply to plantings that are intended to function primarily as filter strips or as riparian buffers, for which other standards are available. (Refer to practice standard 393 – Filter Strip and standard 391 – Riparian Forest Buffer).

CRITERIA

General Criteria Applicable To All Purposes

The minimum field border width on agricultural land shall be 20 feet. For all other land uses the minimum width shall be 10 feet. Wider field borders will be designed based on criteria specific to the purpose(s) for installing the practice.

The field borders will be established to adapted species of permanent grass, legumes, and/or shrubs. Use of locally native plant species with multiple values should be encouraged.

Field borders will be established around the field edges to the extent needed to meet the resource needs and producer objectives.

Seedbed preparation, seeding rates, dates, depths, and sowing methods will be consistent with the Vermont Standard 342 – Critical Area Planting or as approved by the State Conservationist. The specifications in standard 342 – Riparian Forest Buffer will be used in planting shrubs.

Ephemeral gullies and rills present in the planned border area will be smoothed as part of seedbed preparation.

Field borders may be established by leaving vegetated strips when converting or rotating hay or pasture fields into cropland. Field borders may also be established by clearing adjacent woodland. See Standard 460 – Land Clearing.

Additional Criteria To Reduce Erosion From Wind

Locate borders around the entire perimeter of the field, or as a minimum, provide a stable area on the upwind edge of the field as determined by prevailing wind direction data.

Plant stiff-stemmed, upright grasses to trap saltating soil particles.

The minimum height of grass shall be one foot during the critical erosion period.

Additional Criteria To Protect Soil And Water Quality

Water Erosion Reduction, Reducing Runoff and Increasing Infiltration

Locate borders around entire perimeter of the field, or as a minimum, install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

Maintaining Field Setback Distances For Manure and Chemical Applications

Border widths will be designed to conform to minimum field application setback widths established by state or local regulations and requirements for Comprehensive Nutrient Management Plans (CNMP's). Generally, setbacks should be a minimum of 50 feet unless specified otherwise by standard 590 – Nutrient Management.

Sediment Trapping

Locate borders around the entire perimeter of the field, or as a minimum, in areas where runoff enters or leaves the field.

Reducing Soil Compaction from Equipment Parking and Traffic

Border widths will be designed to accommodate equipment parking, field access, equipment turning, loading/unloading equipment, grain harvest operations, etc.

Additional Criteria For Management Of Harmful Insect Populations.

Provide a Harbor For Beneficial Insects

Include herbaceous plants that attract beneficial insects. See planning considerations for including shrubs.

Mowing, harvesting, and pesticide applications will be scheduled to accommodate life cycle requirements of the beneficial insects.

Provide a Habitat to Cause Pest Insects to Congregate

Select plants for the field border that attract pest insects.

Use mechanical, cultural, and/or chemical techniques to reduce pest populations when and where they congregate in the field border.

Additional Criteria To Provide Wildlife Food And Cover

Plants that provide wildlife food and cover shall be used.

Mowing, harvest, and weed control activities within the field border will be scheduled to accommodate reproduction and other requirements of target wildlife species.

Refer to standard 391 – Riparian Herbaceous Buffer for guidance on herbaceous areas that are intended primarily for wildlife.

PLANNING CONSIDERATIONS

Field borders are more effective and provide more environmental benefits when planted around the entire field.

Field borders enhance the aesthetics and provide stability around the field edge.

Borders also provide turn and travel areas for equipment and reduce airborne dust. When used for this purpose, establish grasses that are tolerant of heavy use.

To increase sediment trapping efficiency, consider establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface.

Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.

Wildlife enhancement and other benefits of native plants should be discussed with the producer during planning.

Native species should be used when feasible and meet producer objectives.

Consider mixtures of native or introduced grasses with legumes rather than a single species. A herbaceous border can be over seeded with legumes to increase plant diversity and to provide additional wildlife benefits.

Schedule mowing, harvesting, and weed control to accommodate wildlife nesting needs and other special requirements or purposes.

Waterbars or berms may be needed to breakup or redirect concentrated water flows within the borders.

If bank stabilization is a concern, select fibrous deep-rooted plants.

Consider plants tolerant to sediment deposition and chemicals planned for application.

Rows of shrubs (Standard 380 - Windbreak/Shelterbelt) adjacent to field borders will often enhance field borders ability to harbor beneficial insects, and may also provide additional wildlife benefits.

If installation or maintenance of the practice has potential of affecting cultural resources (archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS state policy for considering cultural resources.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for the practice site. The following items should be specified. NRCS Conservation Job Sheet – 386 – Field Border is available to document the required items. Maintenance requirements should also be documented in the Conservation Plan Narrative. The following items should be specified:

- Purpose of Field Border
- Border widths and lengths based on local design criteria
- Location within the field or farm boundary
- Vegetation to be used, including recommended seed mixtures and woody plant species
- Site preparation, including seedbed preparation method, grading, filling, etc. for control of concentrated flow and other site preparations used for establishment of the field border
- Planting method, including seeding rate and woody species planting density
- Liming or fertilizer requirements
- Operation and maintenance requirements, including recurring items such as mowing

OPERATION AND MAINTENANCE

Field borders require careful management and maintenance for performance and longevity.

The following will be planned and applied as needed:

- Areas damaged by farm machinery, erosion, drought, livestock, chemicals, etc. will be repaired promptly and re-established according to the original plan.
- Remove sediment when six-inches or more has accumulated on the field border.
- Shut off sprayers and raise tillage equipment when entering the field border from adjacent fields.
- Ephemeral gullies and rills that develop in the field border shall be filled, graded and reseeded promptly.
- Competitive weed growth and/or invasion of unwanted woody plants should be controlled by applicable methods such as mowing, burning, chemical application, or manual removal. Federally recognized noxious weeds and state recognized non-native invasive species shall also be controlled by applicable methods.